



# State Revolving Fund Loan Programs

## Drinking Water, Wastewater, Nonpoint Source

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### ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

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#### CITY OF SEYMOUR

THIRD STREET SEWER SEPARATION AND FORCE MAIN,  
DOWNTOWN STORM SEWERS  
AND  
ULTRA-VIOLET DISINFECTION REPLACEMENT  
STATE REVOLVING FUND PROJECT # WW10 03 36 02

**DATE:** January 24, 2011

**TARGET PROJECT APPROVAL DATE:** February 23, 2011

#### I. INTRODUCTION

The above entity has applied to the State Revolving Fund (SRF) Loan Program for a loan to finance all or part of the wastewater project described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA, which can also be viewed at <http://www.in.gov/ifa/srf/>.

#### II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The SRF has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

#### III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the deadline date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

Max Henschen  
Senior Environmental Manager  
State Revolving Fund -- IGCN 1275  
100 N. Senate Ave.  
Indianapolis, IN 46204  
317-232-8623; mhensche at ifa.in.gov

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# ENVIRONMENTAL ASSESSMENT

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## I. PROJECT IDENTIFICATION

Project Name and Address:

**Third Street Sewer Separation & Force  
Main, Downtown Storm Sewer  
Installation, and Ultra-Violet (UV)  
Disinfection Replacement at WWTP**  
City of Seymour  
City Hall  
301-309 N. Chestnut Street  
Seymour, IN 47274

SRF Project Number:

WW10 03 36 02

Authorized Representative:

The Honorable Craig Luedeman, Mayor

## II. PROJECT LOCATION

Seymour is located in Jackson County in south-central Indiana. The city's existing service area and 20-year service area are one and the same. The city's project areas consist of (1) the 3<sup>rd</sup> Street sewer separation area and the proposed force main route, and the downtown storm sewer installation area which is bounded to the north by 5<sup>th</sup> Street, to the west by East Drive, to the south by 2<sup>nd</sup> Street and to the east by Burkhart Boulevard; and (2) the wastewater treatment plant (WWTP). The 3<sup>rd</sup> Street sewer separation and downtown storm sewer installation area is located in the Seymour USGS topographic quadrangle in Jackson Township, T6N, R6E, sections 17 and 18, and also located in the Chestnut Ridge USGS topographic quadrangle in Jackson Township, T6N, R6E, sections 16 and 17; while the WWTP is located in the Seymour USGS quadrangle in Jackson Township, T6N, R5E, SE ¼ of Section 14 (Figure 1).

## III. PROJECT NEED AND PURPOSE

Seymour's collection system consists of a combination of sanitary sewers and combined sewers (i.e., sewers which carry both storm water and sanitary wastewater). Part of the combined system was constructed approximately a hundred years ago as 3- by 5-foot rectangular sewers, comprised of flat rocks.

Seymour's combined sewer system has one permitted bypass point (#101) at the WWTP. During heavy rains, excess flows can be routed through the primary clarifiers of the treatment plant to the chlorine contact tank for disinfection and then discharged through outfall 001 to the East Fork White River.

Seymour's National Pollutant Discharge Elimination System (NPDES) permit required the development of a CSO Long Term Control Plan (LTCP). The city's original CSO LTCP was

approved by the Indiana Department of Environmental Management (IDEM) on June 13, 2005. At the city's request, the IDEM revised the LTCP schedule on July 23, 2009 to allow the city to complete the proposed work in several phases.

Two phases have been completed: Phase I-A included the installation of two new generators at the WWTP; Phase I-B implemented miscellaneous repairs and upgrades to the WWTP. Phase II includes the realignment of Von Fange Ditch, which will provide additional capacity for storm water flow generated from the sewer separation projects described in this document. That project should be completed by the spring of 2011. The city has been issued a construction permit for phases III and IV from the IDEM's Facilities Construction and Engineering Support Section; these phases will separate storm run-off from sanitary sewers. This document describes phases III (construction of a new storm sewer system for the downtown area) and IV (construction of new sanitary sewers along 3<sup>rd</sup> Street and installation of a new force main from the 4<sup>th</sup> Street lift station).

A new storm sewer system will be installed that will discharge storm water to the Von Fange Ditch at the intersection of State Road 258 (6<sup>th</sup> Street) and Johnson Street. Some existing sanitary sewers will have to be relocated since they conflict with the proposed storm sewers. The sanitary sewers that will be relocated are on Johnson Street, 5<sup>th</sup> Street between Johnson and Elm Streets, and in the intersection at 5<sup>th</sup> and Walnut Streets. The new storm sewer system will be capable of handling flows for a 10-year storm event and will discharge to Von Fange Ditch.

The 3<sup>rd</sup> Street sewer separation project includes the installation of a new 12-inch force main that will convey flow from the 4<sup>th</sup> Street lift station to State Road 11 (Broadway Avenue), where it will gravity flow south to the new sanitary sewers at the alley between 2<sup>nd</sup> and 3<sup>rd</sup> Streets. The city will replace sanitary sewers in the alley between 2<sup>nd</sup> and 3<sup>rd</sup> Streets from O'Brien Street west to Ewing Street and from the intersection of the alley at Indianapolis Avenue west to Chestnut Street. The city will also replace sewers along 3<sup>rd</sup> Street from Chestnut Street west to Poplar Street. The new sanitary sewers will be connected to an existing 36-inch sanitary sewer at the intersection of Poplar and 3<sup>rd</sup> Streets.

The city currently uses a malfunctioning UV disinfection system at the WWTP which causes E. coli violations in the treated effluent. The city will replace the malfunctioning UV unit with a new one.

#### **IV. PROJECT DESCRIPTION**

The storm sewer and 3<sup>rd</sup> Street Sewer separation projects include (Figure 2):

- A. installing approximately 1,942 feet of 8-inch polyvinyl chloride (PVC) sanitary sewers;
- B. installing approximately 2,053 feet of 15-inch PVC sanitary sewers;
- C. installing approximately 775 feet of 24-inch of PVC sanitary sewers;
- D. installing approximately 40 feet of 24-inch PVC sanitary sewers with 30-inch steel casing;
- E. installing approximately 785 feet of 36-inch PVC sanitary sewers;
- F. installing approximately 5,250 feet of 12-inch PVC force main;
- G. installing approximately two air release valves;

- H. installing approximately 32 sanitary manholes;
- I. installing approximately 3,231 feet of 12-inch high density polyethylene (HDPE) storm sewer;
- J. installing approximately 1,971 feet of 15-inch HDPE storm sewer;
- K. installing approximately 1,888 feet of 18-inch HDPE storm sewer;
- L. installing approximately 30 feet of 21-inch reinforced concrete pipe;
- M. installing approximately 2,016 feet of 24-inch HDPE storm sewer;
- N. installing approximately 1,369 feet of 30-inch HDPE storm sewer;
- O. installing approximately 1,233 feet of 36-inch HDPE storm sewer;
- P. installing approximately 380 feet of 42-inch HDPE storm sewer;
- Q. installing approximately 676 feet of 6-foot by 3-foot reinforce concrete box (RCB);
- R. installing approximately 2,117 feet of 6-foot by 4-foot RCB;
- S. installing approximately 123 storm inlets; and
- T. installing approximately 40 storm manholes.

The UV disinfection replacement project includes installing two channels with four banks of UV lights (see Figure 3).

## V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

### A. Selected Plan Estimated Cost Summary

<u>Construction Components</u>	<u>Costs</u>
3 <sup>rd</sup> Street Sewer Separation	\$6,657,000
UV Disinfection System	1,100,000
<b>Construction Subtotal</b>	<b>\$7,757,000</b>
Contingencies	650,000
<b>Total Estimated Construction Cost</b>	<b>\$8,407,000</b>
<u>Non-Construction Costs</u>	
Financial	\$ 30,000
Legal	30,000
Engineering Design	493,000
Other Engineering Services	457,000
Soils Engineering (Compaction Test)	40,000
<b>Non-Construction Subtotal</b>	<b>\$1,050,000</b>
<b>Total Estimated Project Cost</b>	<b>\$9,457,000</b>

- B. The city will borrow approximately \$9,457,000 through a 20-year SRF loan at a fixed interest rate to be determined at loan closing. Monthly user rates and charges may need to be analyzed to determine if adjustments are required for loan repayment.

## **VI. DESCRIPTION OF EVALUATED ALTERNATIVES**

- A. Two alternatives were evaluated for the combined sewer separation project including the “No Action” alternative.

1. “No-Action” Alternative

This alternative was eliminated since the city would not be in compliance with its CSO LTCP, and excess flows would continue to receive only disinfection before being bypassed to the East Fork White River. In addition, the century-old flat rock rectangular sewers and other sewers would continue to deteriorate, and the Burkhardt Boulevard lift station would still be undersized, potentially causing backups in the sewer system.

2. Sewer Separation Alternative

This alternative involves the installation of a new sanitary sewer system and a new storm sewer system in the 3<sup>rd</sup> Street or downtown combined sewer area. Storm inlets would be disconnected from the combined sewers and connected to the new storm sewers. In addition, a new force main from the 4<sup>th</sup> Street lift station to the new sanitary portion of the proposed collection system will be installed to alleviate flows at the Burkhardt Boulevard lift station. This was the selected alternative based on cost.

- B. Two alternatives were evaluated for the replacement of the UV disinfection equipment including the “No Action” alternative.

1. “No- Action” Alternative

The “No Action” alternative was eliminated since the city’s WWTP effluent would continue to exceed the daily maximum E. coli limit and repair costs would continue.

2. Replace UV Disinfection Equipment

This alternative involves replacing the UV disinfection equipment with a new system, including upgrades to the electrical system and making minor structural and piping modifications. Based on reliability and cost, this was the selected alternative.

## **VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES**

### **A. Direct Impacts of Construction and Operation**

Disturbed and Undisturbed Areas: The proposed sanitary and storm sewer lines and storm inlets will be installed under existing streets and immediately adjacent to roads in areas previously disturbed by road construction; some sanitary sewers will be placed inside the old stone sewers.

Structural Resources (Figures 4-7): Work will occur in the Seymour Commercial, Walnut Street, and Westover Historic Districts. However, construction and operation of the project will not alter, demolish or remove historic properties. If any visual or audible impacts to historic properties occur, they will be temporary and will not alter the characteristics that qualify such properties for inclusion in or eligibility for the National Register of Historic Places. The SRF's finding pursuant to the Section 106 of the National Historic Preservation Act, is: "no historic properties affected."

Plants and Animals: The proposed projects will not impact state or federal-listed endangered species or their habitat. All trees and vegetation between the back of curb and sidewalk will be protected during construction activities.

Prime Farmland: The proposed project will not cause a conversion of prime farmland.

Wetlands (Figure 8): A new storm sewer outfall will be constructed on Van Fange Ditch, a riverine excavated wetland. The disinfection work will not affect wetlands.

100-Year Floodplain (Figure 9): A small portion of the proposed storm sewer system will be in the 100-year floodplain. However, since the sewers will be installed below ground, no displacement of floodwaters will occur. The WWTP site is entirely in the 100-year floodplain, but has been constructed a minimum of two feet above the 100-floodplain.

Surface Waters: The proposed projects will not adversely affect waters of high quality listed in 327 IAC 2-1-2(3), exceptional use streams listed in 327 IAC 2-1-11(b), or Natural, Scenic and Recreational Rivers and Streams listed in 312 IAC 7-(2), Salmonid Streams listed in 327 IAC 2-1.5-5(a)(3) or waters on the Outstanding Rivers list (Natural Resources Commission Non-Rule Policy Document). A new outfall for the storm sewer system will be installed in Von Fange Ditch; the ditch will be restored to its original state following installation of the outfall using grouted riprap. The city has received wetland permits from the U.S Army Corps of Engineers and from the IDEM.

Groundwater: Dewatering during construction will temporarily affect the groundwater level. Several homes along 5<sup>th</sup> Street between Johnson Street and Calvin Boulevard use private wells. The contractor will be required to provide potable water to these homes during construction if dewatering operations temporarily affect the private wells.

Air Quality: Dust will be produced during construction activities.

Open Space and Recreational Opportunities: The proposed project's construction and operation will neither create nor destroy open space and recreational opportunities.

Lake Michigan Coastal Program: The proposed project will not affect the Lake Michigan Coastal Zone.

The construction and operation of the proposed project will not affect National Natural Landmarks.

## **B. Indirect Impacts**

The city's Preliminary Engineering Report (PER) states: *The City of Seymour, through the authority of its council, planning commission or other means, will ensure that future development,*

*as well as future collection system or treatment works projects connecting to State Revolving Fund (SRF)-funded facilities will not adversely impact archaeological, historical, or structural resources, wetlands, wooded areas or other sensitive environmental resources. The City will require new development and treatment works projects to be constructed within the guidelines of the USFWS, IDNR, IDEM, and other environmental review authorities.*

### **C. Comments from Environmental Review Authorities**

This document serves as the first notice to the Indiana Department of Natural Resources (IDNR) Environmental Unit (EU), the IDNR Division of Historic Preservation and Archaeology (DHPA) and the U.S. Fish and Wildlife Service (USFWS).

*In correspondence dated June 16, 2010 the Natural Resources Conservation Service stated: The project to separate the combined sewer system along 3<sup>rd</sup> Street and to replace the Ultraviolet disinfection unit at the wastewater treatment plant in the City of Seymour, Jackson County, Indiana, as referred in your letter received June 2, 2010, will not cause conversion of prime farmland.*

## **VIII. MITIGATION MEASURES**

The city's PER lists the following mitigation measures:

*No long- term negative erosion, siltation, air quality, or odor impacts are expected from this project. Short-term erosion and siltation impacts will be controlled and monitored by the Contractor during the installation and construction of the sanitary and storm sewer and WWTF improvements.*

*Measures will be taken to minimize dust initiated by this project and dust control will be required by the Contractor during construction within residential areas and downtown limits.*

*Mitigation measures cited in comment letters from the Indiana Department of Natural Resources (IDNR) and the United States Fish and Wildlife Service (USFWS) will be implemented.*

*Dewatering flows will be settled prior to discharge using INDOT approved temporary erosion control technologies.*

## **IX. PUBLIC PARTICIPATION**

A public hearing was held at City Hall at 7:00 PM on June 21, 2010 to discuss the Preliminary Engineering Report. No members of the public attended the hearing.



**COMBINED SEWER SEPARATION AND UV DISINFECTION  
PROJECT LOCATION MAP  
COMBINED SEWER SYSTEM SEPARATION  
CITY OF SEYMOUR  
JACKSON COUNTY, INDIANA**



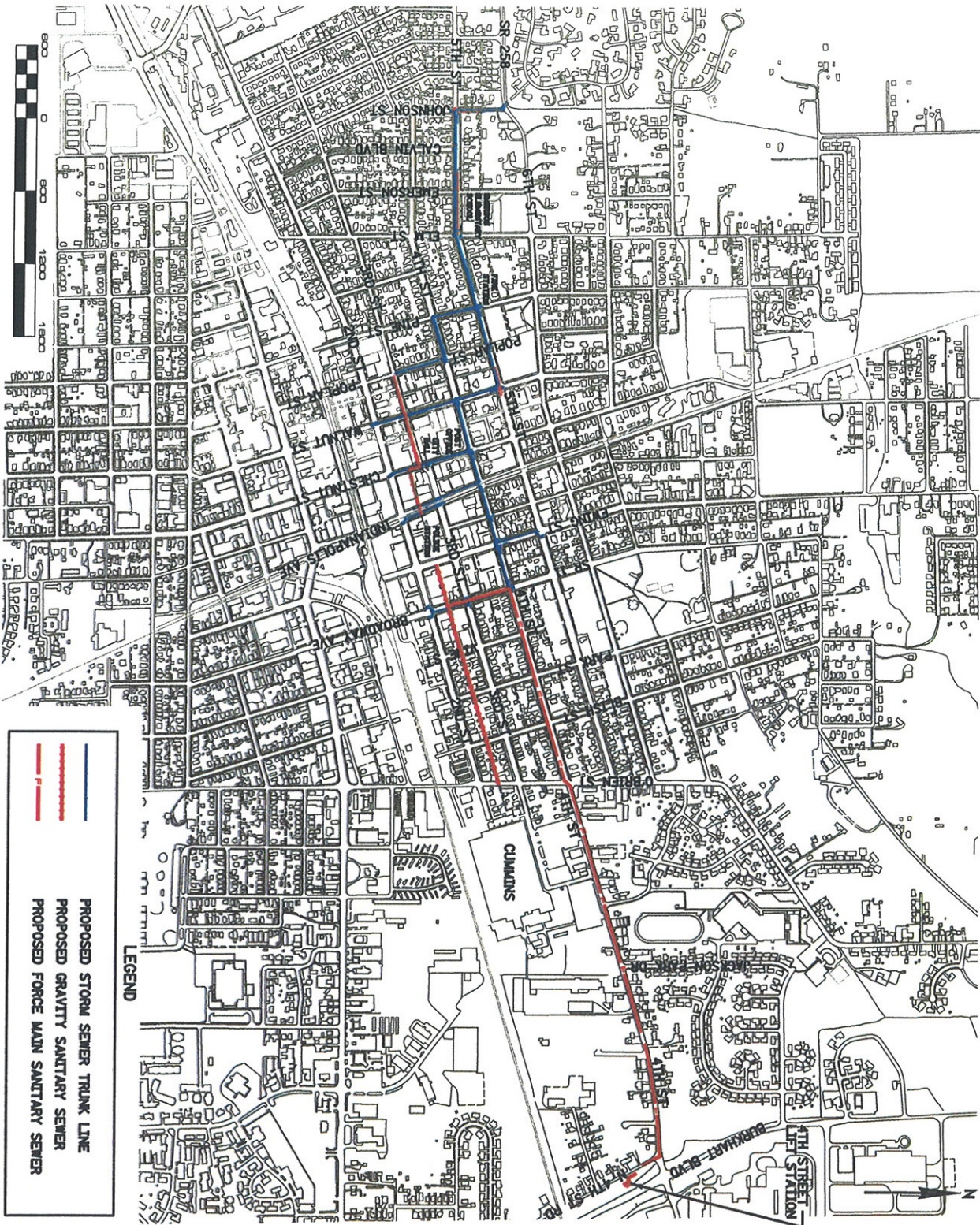
**FIGURE 1**

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## PROJECT LOCATION MAP

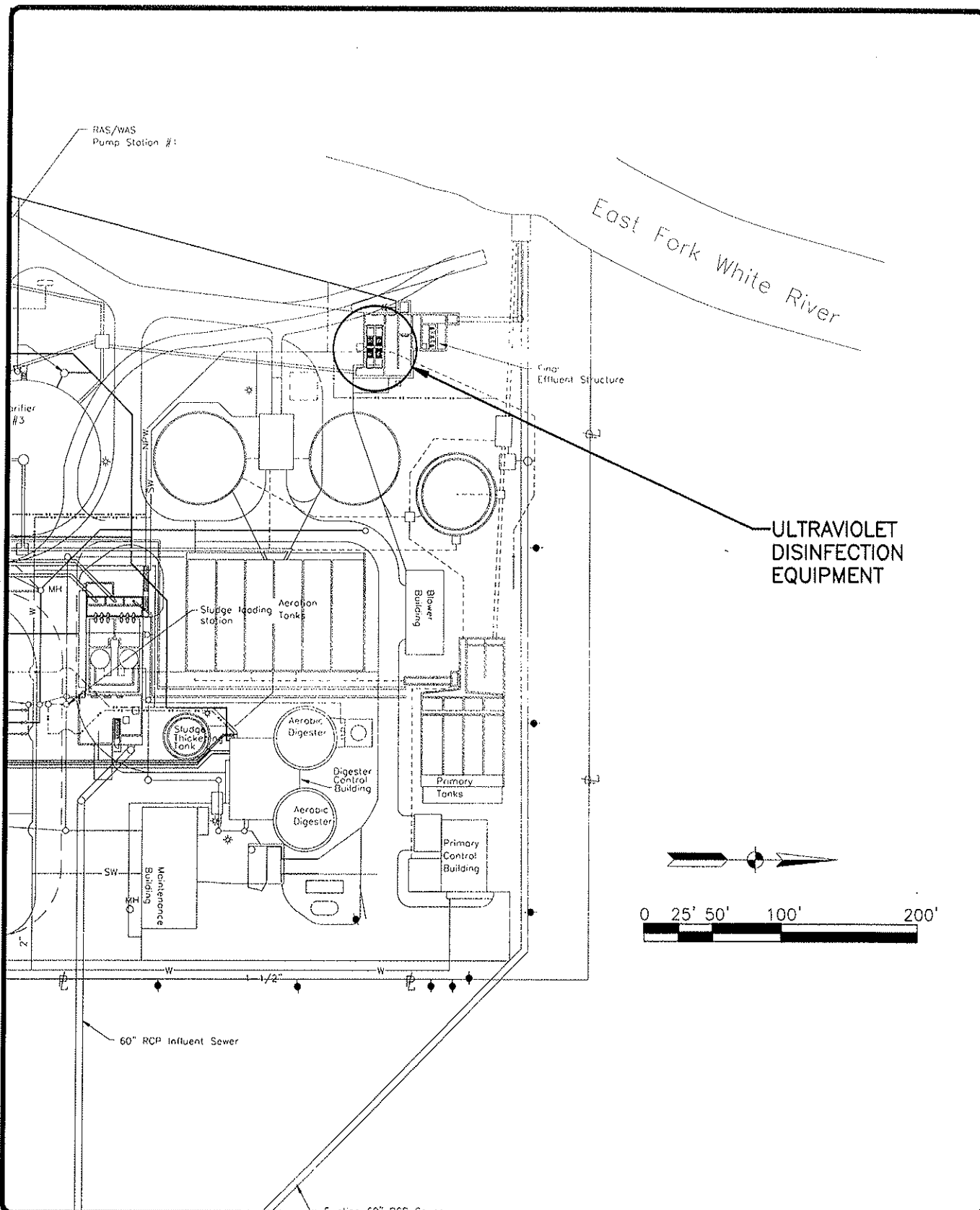
COMBINED SEWER SYSTEM SEPARATION  
CITY OF SEYMOUR  
JACKSON COUNTY, INDIANA



FIGURE 2

Revised 12-20-2010

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## TREATMENT FACILITY PROJECT AREA

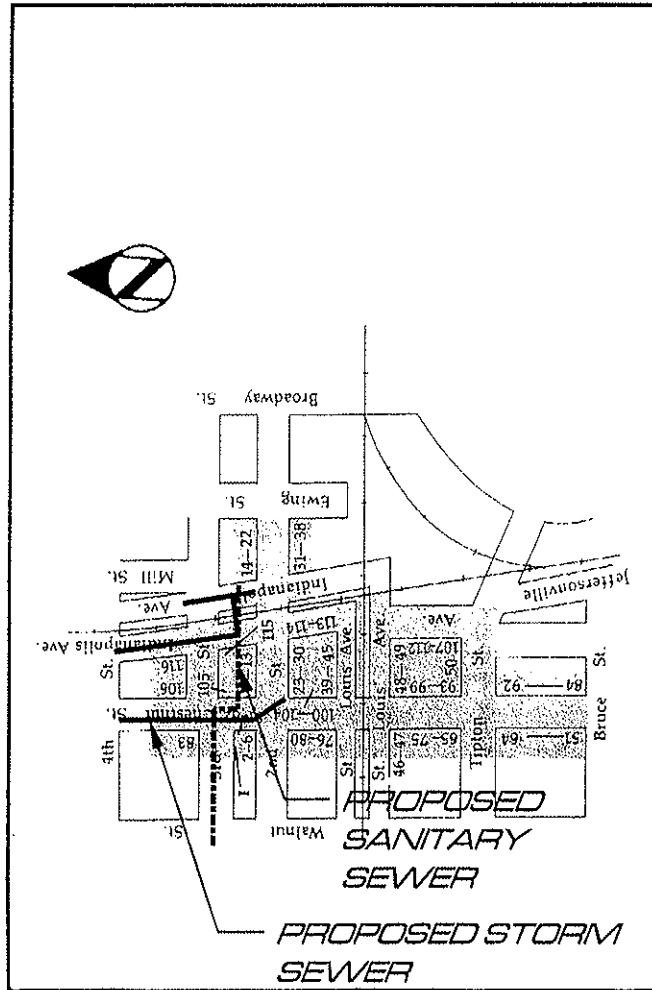
SRF ADDENDUM NO. 1

CITY OF SEYMOUR  
SEYMOUR, INDIANA



FIGURE 3

# Seymour Commercial Historic District (071-581-31001-116)



The town of Seymour owes its origin, prosperity and even its name to the railroads. Meedy Shields registered a plat for the town in 1852. The original plat encompassed 100 lots or 10 blocks and was bounded by East Fifth Street, North Broadway Street, Cincinnati Avenue and Indianapolis Avenue.

Shields laid out the town along the Jeffersonville, Madison and Indianapolis (JMI) tracks which was a major north/south rail line. Shield's community was in economic competition with the town of Rockford to the north. The rivalry was fierce and soon Rockford disparagingly referred to its

neighbor as "Mule Crossing." The tiny village was no more than a rail crossing. Most of the area was swampland and a creek ran through the center of the present business district. However, during the next five years several events were responsible for making the community a major commercial center.

In 1854 Shields convinced the east/west Ohio and Mississippi (O&M) Railroad to intersect the JMI line at the town by agreeing to provide preparation work on a rail bed and to name the community in honor of the railroad's civil engineer, Mr. Seymour. With the opening of the

O&M through Seymour, the town was connected by rail with Indianapolis, Cincinnati, St. Louis and Louisville.

As Seymour was rising as a new business center, Rockford was in a decline. Rockford's future was assured in 1857 when the Indiana State Legislature passed a sweeping new law.

Introduced by Meedy Shields, the legislation stipulated that all trains had to stop at the intersection of rail lines for safety. Because Seymour was situated at such an intersection, these required stops translated into the development of a small business district. Travis Carter and Shields both operated planing mills, and soon small frame commercial structures lined Seymour's streets.

By 1860 the town's population was 924. Only four years later, it reached over 1500 and Seymour was incorporated as a city. Gradually, the early frame stores gave way to more substantial brick storefronts and the business district expanded.

The earliest extant buildings in the commercial area were constructed during the early 1880s. The Walton Hotel (31112) and the Lynn Hotel (31115), both examples of the Italianate style, were built to accommodate the many rail travelers who stopped in Seymour. Other commercial buildings of the era include two structures at 200 and 120 West Second Street (31006,008) and a building at 101 North Chestnut Street (31076) all in the Italianate style.

Seymour's commercial district experienced its zenith during the period 1890-1930. It was during this time that many of the area's significant commercial and public buildings were constructed.

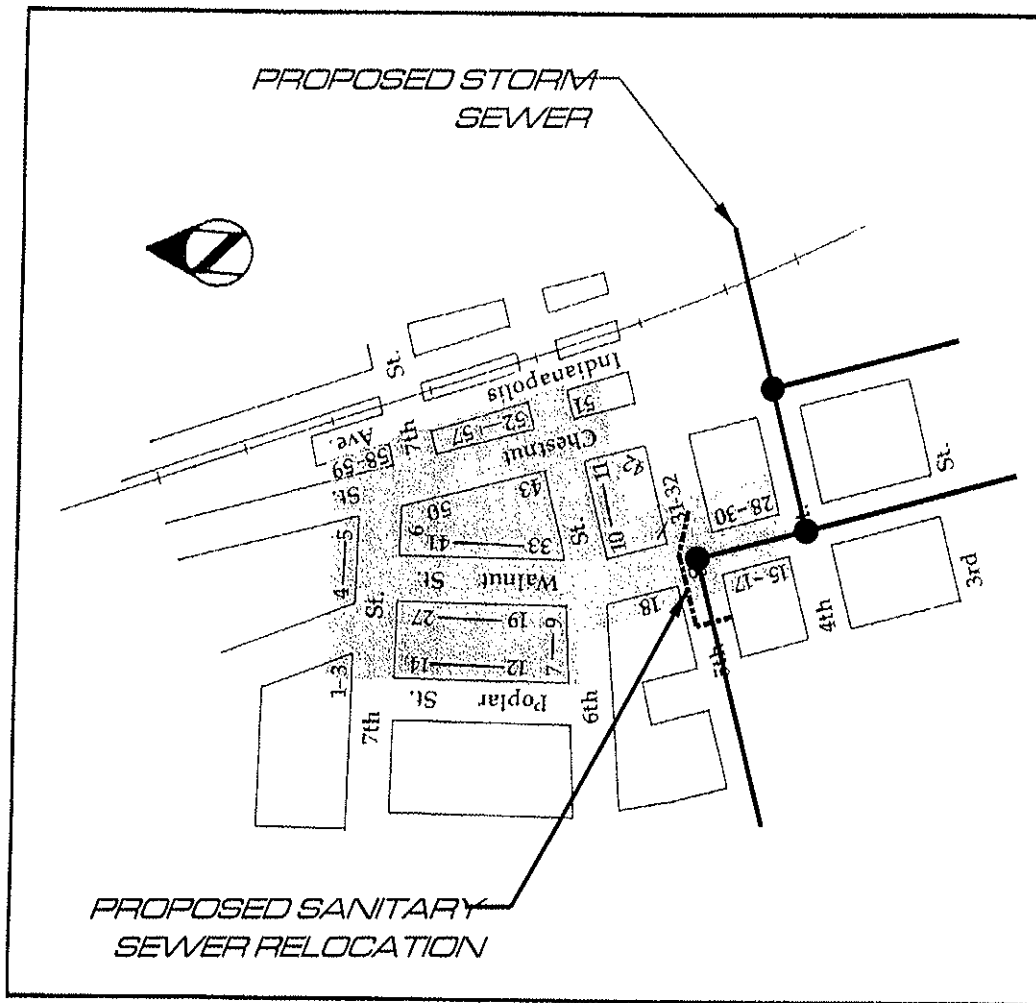
Fraternal organizations such as the Masons built their meeting places in the commercial area. The

**HISTORICAL MAP  
STORM AND SANITARY SEWER  
COMBINED SEWER SYSTEM SEPARATION  
CITY OF SEYMOUR  
JACKSON COUNTY, INDIANA**

**STRAND**  
ASSOCIATES, INC.  
ENGINEERS

**FIGURE 4**

# Walnut Street Historic District (071-581-32001-059)



The Walnut Street Historic District is located immediately north of Seymour's commercial area. It contains a fine collection of late nineteenth and early twentieth century houses. Its wide, tree-lined streets give the district a distinct character reminiscent of other turn-of-the-century neighborhoods in Jackson County.

Because of the area's proximity to the commercial district, many of Seymour's prominent businessmen had their homes built in the Walnut Street area. One of the oldest houses in the district is the Bollinger House (32030) built for Elmer Bollinger in 1879. Bollinger, a native of Switzerland, owned and operated a grocery business in the downtown. The house is one of the few examples of the Italianate style in the district.

Most of the houses in the area were built primarily during the last decade of the nineteenth century. As a result, the Queen Anne style is well represented. The Vehsledge House (32042) is an outstanding example of the style in brick construction. Two other notable examples of the Queen Anne style include the Whitmer House at 615 North Chestnut Street (32045) and the Dr. Casey House at 625 North Chestnut Street (32047).

Another merchant who built his home in the area was William Masters. His Queen Anne/Free Classic style house (32004) was constructed about 1885. The Milhouse House at 635 North Chestnut Street (32050) is another fine example of a Free Classic style house.

Two early twentieth century houses should also be noted. The Groub-Whitcomb House (32014) was designed by Frank Hunter in 1917. The Tudor Revival style house was once owned by Indiana Governor Edgar Whitcomb. A Spanish Eclectic

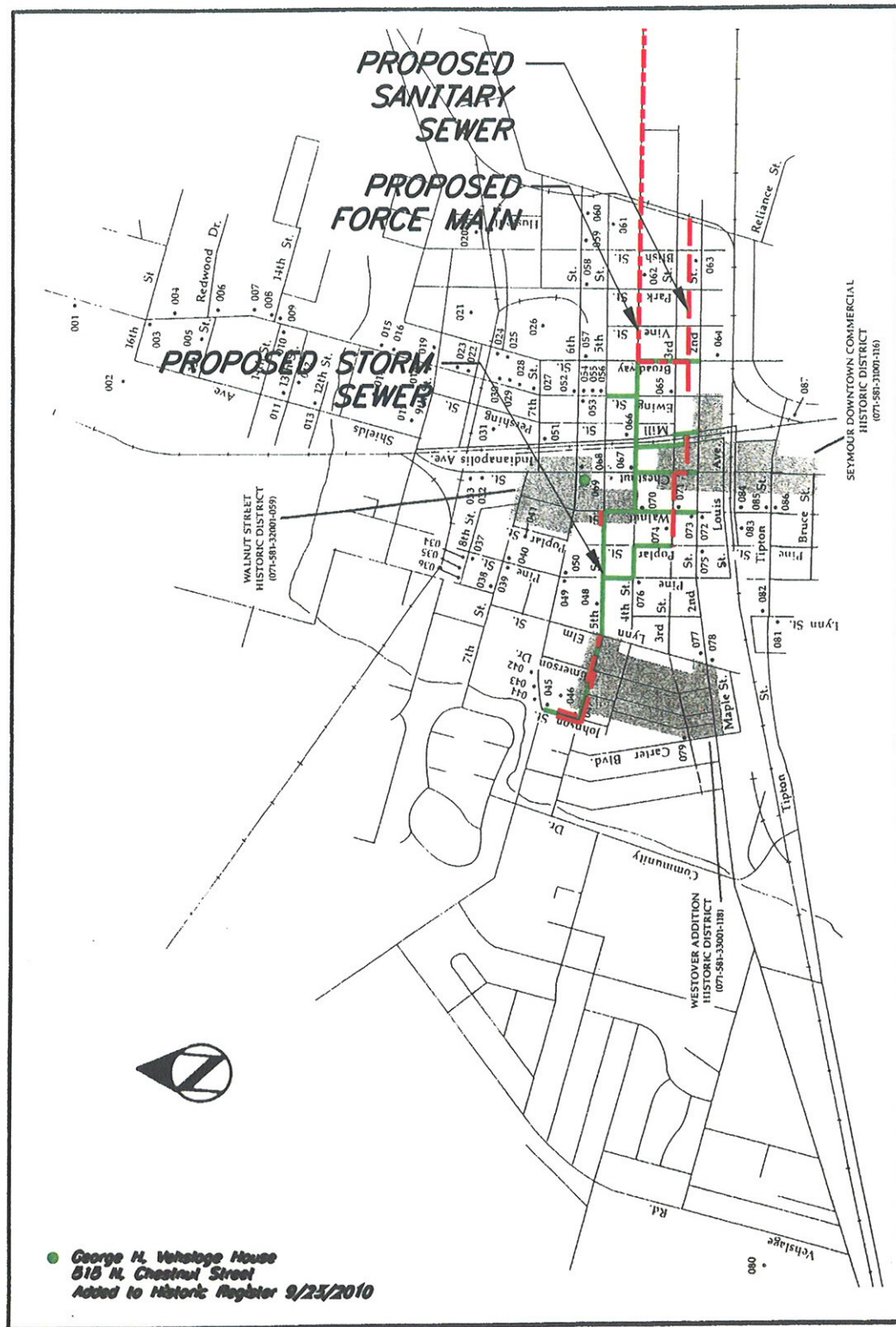
**HISTORICAL MAP  
STORM AND SANITARY SEWER  
COMBINED SEWER SYSTEM SEPARATION  
CITY OF SEYMOUR  
JACKSON COUNTY, INDIANA**



**FIGURE 5**



# Seymour Scattered Sites (34001-152)



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**HISTORICAL MAP**  
**STORM AND SANITARY SEWER**  
**COMBINED SEWER SYSTEM SEPARATION**  
**CITY OF SEYMOUR**  
**JACKSON COUNTY, INDIANA**



FIGURE 7

This map was prepared by the Indiana Geological Survey, using data believed to be accurate; however, a margin of error is inherent in all maps. This product is distributed "AS-IS" without warranty, including but not limited to, accuracy, completeness, or fitness for a particular purpose or use. There is no attempt to delineate the limits of federal, state or local government. A detailed on-the-ground survey and historical analysis of a single site may differ from this map.

Indiana Geological Survey

## FIGURE 8

